

Atomic Structure MCQ Question Answer

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Question: 1. Charge on fundamental particle neutrino is

- Option A. 0
- Option B. +1
- Option C. -1
- Option D. None of these

Question: 2. The fundamental particle that has least mass is

- Option A. meson
- Option B. alpha-particle
- Option C. electron
- Option D. neutron

Question: 3. Which of the following has the highest mass?

- Option A. Neutron
- Option B. Alpha particle
- Option C. Electron
- Option D. Deuterium

Question: 4. Cathode rays contain a stream of

- Option A. n
- Option B. r
- Option C. e^{0+1}
- Option D. e^{0-1}

Question: 5. Mass of positron is the same to that of

- Option A. proton
- Option B. meson
- Option C. electron
- Option D. neutron

Question: 6. The exchange of particles considered responsible for keeping the nucleons together are

- Option A. meson
- Option B. electron
- Option C. positron
- Option D. neutron

Question: 7. Charge on an electron was shown by

- Option A. J. J. Thomson

- Option B. Kirchoff
- Option C. Ohm
- Option D. M.Planck

Question: 8. Which of the following atoms has a non-spherical outermost orbital.

- Option A. H
- Option B. Li
- Option C. Be
- Option D. B

Question: 9. The number of neutrons present in K_{19}^{39} are

- Option A. 28
- Option B. 39
- Option C. 20
- Option D. 19

Question: 10. In Lyman series an electron jumps from higher energy level to

- Option A. K energy level
- Option B. M energy level
- Option C. N energy level
- Option D. L energy level

Question: 11. The wavelength of an electron

- Option A. is equal to that of light
- Option B. remains constant with velocity
- Option C. decreases with an increasing velocity
- Option D. increases with an decreasing velocity

Question: 12. No two electrons in an atom can have the same values of all four quantum numbers according to

- Option A. Hund's rules
- Option B. Flemming rule
- Option C. Pauli's exclusion principle
- Option D. Bohr theory

Question: 13. The charge on an atom of $\text{A}_{13}^{27}\text{L}$ is

- Option A. +40
- Option B. +27
- Option C. +14
- Option D. Zero

Question: 14. Bohr's concept of the orbit in an atom was contradicted by

- Option A. de Broglie relationship
- Option B. Uncertainty principle
- Option C. Planck's hypothesis
- Option D. Hund's rule

Question: 15. The velocity of a photon is

- Option A. dependent on its wavelength
- Option B. dependent on its source
- Option C. equal to cube of its amplitude
- Option D. independent of its wavelength

Question: 16. The number of unpaired electrons in fluorine atoms is/are

- Option A. 4
- Option B. 2
- Option C. 1
- Option D. 0

Question: 17. Among the following ions, which has the highest paramagnetism?

- Option A. $[\text{Cr}(\text{H}_2\text{O})_6]^{+3}$
- Option B. $[\text{Fe}(\text{H}_2\text{O})_6]^{+2}$
- Option C. $[\text{Cu}(\text{H}_2\text{O})_6]^{+2}$
- Option D. $[\text{Zn}(\text{H}_2\text{O})_6]^{+2}$

Question: 18. In the case of atomic spectrum of hydrogen which series of lines lie in the visible region?

- Option A. Balmer
- Option B. Paschen
- Option C. Pfund
- Option D. None of these

Question: 19. When the electron is excited from K level to M level we get

- Option A. γ - rays
- Option B. cathode rays
- Option C. continuous spectra
- Option D. absorption spectra

Question: 20. Isotopes have different

- Option A. arrangement of electrons
- Option B. no. of p and e'
- Option C. no. of neutrons
- Option D. no. of electrons

Question: 21. Davisson and Germer gave an experimental evidence for

- Option A. wave nature of electron
- Option B. particle nature of electron
- Option C. particle nature of light
- Option D. wave nature of light

Question: 22. The atomic structure of an atom of an element is $1s^2, 2s^2 2p^6, 3s^2 3p^6$. The element is

- Option A. Cl-35
- Option B. S-32
- Option C. N-18
- Option D. O-16

Question: 23. The size of nucleus is

- Option A. 10^{-12} m
- Option B. 10^{-8} m
- Option C. 10^{-15} m
- Option D. 10^{-10} m

Question: 24. Isotones have same

- Option A. mass number
- Option B. nuclear mass
- Option C. no. of neutrons
- Option D. no. of electrons

Question: 25. The number of unpaired electrons in the ground state of chromium is

- Option A. 1
- Option B. 6
- Option C. 7
- Option D. 2

Question: 26. The wavelength of an electron moving with a velocity

$5 \times 10^5 \text{ m sec}^{-1}$ is $\left(h = 6.63 \times 10^{-34} \text{ kg m}^2 \text{ sec}^{-1} \right)$

- Option A. $11.6 \times 10^{-5} \text{ m}$
- Option B. $11.6 \times 10^{-9} \text{ m}^{-1}$
- Option C. $14.6 \times 10^{-5} \text{ m}$
- Option D. $1.46 \times 10^{-9} \text{ m}$

Question: 27. The maximum number of electrons in a sub-energy level is equal to

- Option A. $4(2l + 1)$

Option B. $2(2l + 1)$

Option C. $2n^2$

Option D. n^3

Question: 28. Electronic configuration of Cu^+ is

Option A. $[\text{Ar}] 3d^9$

Option B. $[\text{Ar}] 3d^{10}$

Option C. $[\text{Ar}] 3d^9 3s^2$

Option D. $[\text{Ar}] 3d^7 4s^1 4p^1$

Question: 29. The orbitals with maximum number of possible orientation is:

Option A. s

Option B. d

Option C. f

Option D. p

Question: 30. The correct set of quantum numbers for the impaired electron of fluorine atom is

Option A.

n l m

2 1 0

Option B.

n l m
2 1 1
Option C.

n l m
3 1 1
Option D.

n l m
3 0 0

1	A	
2	D	
3	B	
4	D	
5	C	
6	A	
7	A	
8	D	
9	C	
10	A	
11	C	
12	C	
13	D	
14	B	
15	D	
16	C	
17	B	
18	B	
19	D	
20	C	
21	D	
22	A	
23	C	
24	C	
25	B	
26	D	
27	B	
28	B	
29	C	